

Introduction

Part I.

1. Explain the following terms.
 - data
 - database
 - database management system
 - data model
 - query
 - data constraints
2. Regarding the Village Cinemas, suppose that a DBMS is used to manage the data for the Village Cinemas website (<http://www.villagecinemas.com.au/>). Discuss and answer questions.
 - a. What are the classes of things that are kept in the database? Examples of things include Movie, Cinema and Screen session.
 - b. For each class, what details do you think are kept in the database? For instance for a movie, the information might include title, classification and release date.
 - c. Based on the website, what queries can be answered with the current database?
 - d. What queries can not be answered with the current database but you would like the database to answer?
 - e. Based on (a)—(d), how do you think the DBMS has helped organization of the Village Cinemas data.
3. Regarding the following example scenarios, discuss if the data should be managed with a text file, DBMS or MS Excel spreadsheet.
 - a. To keep the contact details of your friends.
 - b. The RMIT Student Registrar would like to keep student academic records over years. These records are initially entered and later may be updated by many staff from different schools. The academic records are used, for example, to check student performance and eligibility for graduation.
 - c. To keep a record of the details of all classes you are attending this semester. For example,
 - isys1057, Database concept lecture, Wednesday 10.30am in 10.4.27, and taught by Jenny Zhang.
 - isys1057, Database concept tutorial, Thursday 2.30pm in 10.9.48, and taught by Ian Baker.

Part II.

The objective of this part is to get you familiarized with the teaching learning tools and used in this course. Try your best to finish all the tasks.

RMIT Student Email account

As a student of RMIT, you have an official student Email account. If your student number is 1234567, your student email account then will be

s1234567@student.rmit.edu.au

This is the address where the university communicate with you. For example, your assignment results will be sent to this address. Access the following URL to check your emails:

<http://studentems.rmit.edu.au> .

Do the following once your login: (ask lab assistants if you need help)

- Check if there is any email in your mailbox.
- Send one of your classmates a message.

Unix Basics

- Login into a machine called "Yallara". This is a unix machine (in contrast to windows machines).
- List the contents of your home directory.
- Create a new directory called "DBC" in your home directory.

Course homepage

The course homepage is at the following URL:

<http://www.rmit.edu.au/learninghub>

Open the course homepage with a web browser and answer the following questions:

- From the course guide, are there any hurdles to pass the course?
- From the Blackboard --> Weekly Schedule, Which University week we are in now?
- How many assignments will you have? When will the first assignment be released, and what is its due time?
- Download and save this lab sheet as a file "labsheet1" in the directory "DBC" of your home directory.

The Oracle DBMS

Oracle is a DBMS in our School for your practical work. You will need to build databases in Oracle and write queries against the Oracle SQL*Plus system to get information from databases. A read-only sample database called "movies" has been built for you to practice.

- Get the details on Oracle account from Blackboard --> Announcement, and then login to your Oracle account on Yallara.

Drawing a diagram and producing a pdf file

You will need to draw ER diagrams (taught later) and produce pdf files for your assignments.

1. You should use a drawing tool to compose your ER diagram, for example Omnigraffle (Mac), Visio (Windows), or MS Word (Windows). Word is available on the School windows servers.
2. You then plug in the diagram into a word file which contains the rest of your assignment.
3. Convert the word file to a pdf file by following the following steps below:
 - From the top menu, File --> Print
 - Printer name --> CutePDF Writer
 - Click "OK".
 - Save as --> supply a file name.

Task: Create the following ER diagram (you will understand its meaning later) with Word, and save it in a file called *test-er.doc* in your home directory on Yallara. Then convert *test-er.doc* into a pdf file named *test-er.pdf*. You have successfully created a pdf file when you can view test-er.pdf with Adobe Reader.

